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ABSTRACT

The purpose of this study was to determine if students' gender was related to their own and their perceived parental motivational orientations in school achievement. Motivational orientations in school achievement were measured by a number of items focusing on the meaning of success in school, preference for school feedback, school task preference, dimensions and attributions of success and failure in school, and achievement goal orientations. A total of 107 8th-, 107 10th-, and 119 12th-grade Roman Catholic school students (170 males and 163 females) anonymously completed a questionnaire. The data were analyzed by means of factor analysis, discriminant analysis, and stepwise multiple regression analysis using gender, age, socioeconomic status, and self-perceived academic ability as predictor variables. Results show a number of gender differences, including those in achievement goal orientations and in the attribution of failure in school to the difficulty of school work. Females tend to perceive success as more controllable and internal relative to boys. Implications are discussed in terms of research literature on sex differences and differential parental socialization practices. Two tables present study data. Contains 26 references. (Author/SLD)

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# Gender Differences in Students' and Students' Perceived Parental Academic Motivational Orientations

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## Abstract

The purpose of this study was to determine if students' gender was related to their own and their perceived parental motivational orientations in school achievement. Motivational orientations in school achievement were measured by a number of items focusing on the meaning of success in school, preference for school feedback, school task preference, dimensions and attributions of success and failure in school, and achievement goal orientations. A total of 333 8th-, 10th-, and 12th-grade Roman Catholic school students anonymously completed a questionnaire. The data were analyzed by means of factor analysis, discriminant analysis, and stepwise multiple regression analysis using gender, age, socioeconomic status, and self-perceived academic ability as predictor variables. Results showed a number of gender differences, including those in achievement goal orientations and in the attribution of failure in school to the difficulty of school work. The implications of these findings are discussed in terms of the research literature on sex differences and differential parental socialization practices.

# Gender Differences in Students' and Students' Perceived Parental Academic Motivational Orientations

In research on gender differences in achievement causal attributions, the focus has been typically on specific causal attributions that are used to explain success and failure. For example, students were typically asked to identify the causes for their success or failure in an achievement task, and the findings generally show that girls are more likely to choose effort attributions whereas boys are more likely to choose ability and luck attributions (see, e.g., Ryckman & Peckham, 1987; Stipek, 1984). Few studies with school-age subjects, however, have focused on gender differences in the perception of causal attributions students indicated for their success or failure in schoolwork. It is important to study subjects' perception of causal attributions because the researcher and the subject may not always agree on the meaning of the subject's causal attributions. This is because such factors as the ambiguity of the attributional statement, individual differences, and situational variability may lead the researcher to misjudge the underlying properties of a given attribution (Russell, 1982). The perception of causal attributions subjects have indicated for their success or failure in a given achievement situation was studied by Russell (1982). The efforts of his work resulted in the development of the Causal Dimension Scale which assesses the perception of

causal attributions of success and failure in terms of the locus of causality, stability, and controllability dimensions described by Weiner (1979). This scale has been shown to have evidence of validity and reliability (e.g., Russell, McAuley, & Tarico, 1987). Since the perception of causal attributions is not identical to causal attributions (Russell, 1982), and since few, if any, studies with school-age subjects have focused on gender differences in the perception of causal attributions subjects have indicated for their success or failure in schoolwork, one purpose of this study was to explore gender differences in the perception of causal attributions students have indicated for their success or failure in schoolwork in terms of the locus of causality, stability, and controllability dimensions described by Weiner (1979). In addition, the usual causal attributions of success and failure in schoolwork were examined. Since previous studies have shown gender differences in causal attributions and since perceptions of causes of success and failure are one interrelated aspect of causal attributions, it was therefore hypothesized that there would be gender differences in the perception of causal attributions as well as in causal attributions of success and failure in school achievement.

Studies (e.g., Mazur, 1989; Travis, Burnett-Doering, & Reid, 1982) have shown that females tend to have stronger affiliative motives and affiliative values than males. Translated into the context of achievement motivation, this

suggests that, in achievement situations, girls might have a stronger socially oriented achievement goal orientation, or social solidarity goal, compared to boys. Social solidarity goal is characterized by a focus on interpersonal relations such as demonstrating good intentions, seeking social approval and so on. A person displays a social solidarity goal when the purpose of his or her engagement in a task is to seek social approval so as to establish and/or maintain good interpersonal relations (see, e.g., Maehr & Braskamp, 1986). Girls also are found to tend to outperform boys in schoolwork (see, e.g., Mussen, Conger, Kagan, & Huston, 1990; Sadker, Sadker, & Steindam, 1989; Lueptow, 1984). This gender difference in school performance suggests that girls, relative to boys, might have a stronger task goal, which is characterized by an emphasis on the task at hand, effort and improvement in one's work and so on (cf. Maehr, 1984; Maehr & Braskamp, 1986) since a strong task orientation is essential for successful school performance. A second purpose of this study was therefore to determine if gender was related to achievement goal orientations. It was hypothesized that gender would be related to achievement goal orientations such that girls would show a stronger task goal and social solidarity goal orientation than boys.

Since parents are considered the primary socialization agents of children (see, e.g., Hetherington & Parke, 1986) and since studies showed that parents often treat their sons and daughters differently (e.g., Parsons, Adler, & Kaczala,

1982), a third purpose of this study was to determine if gender was related to perceived parental achievement goal orientations as well as causal attributions for students. It was hypothesized that gender would be related to these measures.

## Method

Participants. Students from the 8th-, 10th-, and 12th-grade classes in an urban area in eastern central Wisconsin were recruited for participation in the study. All participants were recruited from Roman Catholic schools because they tend to be a neglected population in research and also because studies (e.g., Coleman & Hoffer, 1987) showed that they tend to outperform their public school peers academically in the U.S. Students in these grade levels were recruited for two reasons. First, because they would be better able than younger students to handle the tasks at hand. The tasks were relatively sophisticated intellectually and were also entirely verbal, both of which demand the mastery of a minimum level of vocabulary and reading comprehension skills. Second, because there is reason to believe that it was at the level of about grade seven children begin to exhibit an adultlike conception of ability (see, e.g., Nicholls & Miller, 1984).

The sample consisted of 333 participants. They were distributed by grade and sex as follows: Grade 8: 54 boys and 53 girls; Grade 10: 56 boys and 51 girls; Grade 12: 60 boys and 59 girls. The age of these students ranged from 13

years 1 month to 19 years 0 month with a mean of 15 years 9 months. The ethnicity of all of these participants was White, non-Hispanic.

The socioeconomic status (SES) of the students was measured in terms of the average of father's and mother's education (cf. Bjorklund & Weiss, 1985) using the following scale: 1=no schooling or some elementary school; 2=completed elementary school; 3=some secondary school; 4=completed secondary school; 5=some post-secondary education; 6=completed college or university. The mean and standard deviation of SES for the sample were 5.02 and .81, respectively.

Measures. Participants were asked to respond anonymously to a questionnaire. The first part of the questionnaire asked students to provide demographic information (e.g., gender, age, father's and mother's education, ethnicity). The second part of the questionnaire asked students to respond to the dependent measures.

The dependent measures in this study were obtained from previous studies (Russell, 1982; Ames & Archer, 1987, 1988). They included measures of the following aspects of academic motivational orientations: causal dimensions of success and failure, causal attributions of success and failure, and achievement goal orientations.

Specifically, Causal dimensions for success and failure were measured by using the Causal Dimension Scale developed by Russell (1982). Attribution of success (failure) in

school was measured by asking students to indicate how important each of four attributions was a reason for their success (failure) in school using a scale from 1 (not an important reason) to 5 (an important reason). The four attributions were: (a) you have (don't have) ability; (b) you have worked very hard (didn't work hard enough);, (c) the work was easy (difficult); and (d) the teacher did a good (poor) job (cf. Ames & Archer, 1987, 1988). Achievement goal orientation was measured by asking students to indicate how satisfied they were using a scale from 1 (satisfied a little) to 5 (satisfied a lot) when they: (a) learn something new; (b) get a good grade; (c) understand how to do their homework; (d) do better than other students in their class; (e) find the work easy; (f) read something interesting; (g) work on a challenging project; (h) work hard; (i) see improvement in their work; (j) please the teacher; (k) please their parents; (l) get one of the highest grades; and (m) do well without having to work hard.

In addition, the students were asked to respond to this same set of dependent measures (minus the Causal Dimension Scale for success and failure) according to their perception of the parent, father or mother, to whom they felt emotionally closer.

Procedure. The questionnaire was administered to the students in their classrooms by the author, who was previously unknown to the students. They were told that there were no right or wrong answers in the questionnaire

and the best answers would be those that honestly and accurately reflect their true thoughts and feelings. The students were debriefed about the purpose of the study after they all completed their questionnaires anonymously.

## Results

In the data analysis, stepwise multiple regression analysis was performed with the following predictor variables: gender, SES, self-perceived academic achievement, age, interaction between SES and self-perceived academic achievement, and interaction between gender and self-perceived academic achievement. Also, discriminant analysis was performed with self-perceived academic achievement, gender, age, and SES as predictor variables. Self-perceived academic achievement was defined in terms of students' responses to a question asking how they compared to other students in their grade level using a 7-point scale (1=one of lowest achievers; 7=one of highest achievers - cf. Ames & Archer, 1987, 1988).

The dependent variables in the analysis were students' responses to the causal attribution items and the scales that emerged from the factor analysis (with varimax rotation) of the items for the Causal Dimension Scale and the 13 items that measured achievement goal orientations.

The significant findings on gender differences in students' academic motivational orientations are shown in Table 1.

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Insert Table 1 about here

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It should be noted that the intercorrelations among the measures shown in Table 1 are generally very low. The five highest correlations are .40, .26, -.20, .18, and .16. These findings suggest that the measures are relatively independent measures in and of themselves.

As can be seen from Table 1, gender was found to be a significant predictor for the following two scales that measured the perception of causal attributions: a) perception of cause of success as internal and controllable (five items with a Cronbach's alpha of .70), and b) perception of cause of failure as internal (four items with a Cronbach's alpha of .60). Specifically, girls were found to perceive the primary cause for their success in schoolwork to be more internal and controllable relative to boys. They also were found to perceive the primary cause for their failure in schoolwork to be more internal relative to boys.

With regard to causal attributions, girls were also found to attribute their failure in schoolwork to lack of ability, lack of effort, and the difficulty of the task more than boys.

Also, as can be seen from Table 1, gender was found to be a significant predictor for the following two scales that measured achievement goal orientations: a) task goal (six

items with a Cronbach's alpha of .70), and b) social solidarity goal (three items with a Cronbach's alpha of .69). As noted previously, a task goal is characterized by an emphasis on the task at hand, effort and improvement in one's work and so on while a social solidarity goal emphasizes interpersonal relations such as demonstrating good intentions, seeking social approval and so forth (see, e.g., Maehr, 1984; Maehr & Braskamp, 1986). Specifically, girls were found to have a stronger task goal and social solidarity goal relative to boys.

The significant findings on sex differences in perceived parental academic motivational orientations are presented in Table 2.

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Insert Table 2 about here

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As can be seen from Table 2, girls were found to perceive their parents to emphasize their grades on tests and assignments more relative to boys (Wilk's Lambda = .97, $p < .05$). They also were found to perceive their parents to emphasize how well they do compared to other students in their class less relative to boys (Wilk's Lambda = .97, $p < .05$), but they were found to perceive their parents to emphasize how hard they work more relative to boys (Wilk's Lambda = .96, $p < .01$), and to perceive their parents to attribute their failure in schoolwork to the difficulty of the task more relative to boys (beta = -.11, $p < .05$).

## Discussion

The finding that girls, relative to boys, tended to attribute their failure in schoolwork to lack of ability and lack of effort is consistent with the results from other studies (see, e.g., Dweck & Reppucci, 1973; Nicholls, 1975; Ryckman & Peckham, 1987; Stipek & Gralinski, 1991).

In the present study, girls, relative to boys, were found to perceive the cause for their success to be more internal and more controllable. They were also found to perceive the cause for their failure to be more internal. These findings seem to corroborate those from this and other studies noted earlier that girls tended to attribute failure to lack of ability and effort since ability and effort are both internal attributions. Together, they seem to provide corroborative evidence to suggest that girls, relative to boys, demonstrate a stronger sense of personal responsibility for school achievement outcomes.

An internal locus of control has been found in numerous studies to correlate positively with cognitive performance measures such as school grades and achievement test scores (see, e.g., Chapman & Skinner, 1989; Stipek & Weisz, 1981). Students who believe that outcomes occur as a result of their own actions or attributes are generally found to perform better than those who believe that their own actions or attributes have little influence on the outcomes. The greater sense of personal responsibility for academic achievement outcomes suggested by the present findings thus

may help explain why girls tend to outperform their male peers in schoolwork.

It should be noted that relative to boys, girls were also found to be more likely to attribute their failure in schoolwork to the difficulty of the task. This finding suggests that girls are by no means immune to assigning blames to others for their failures. The implication seems to be that it might be important to educate girls to try to set reasonable goals or set appropriate expectations for their performance on tasks assigned to them. If failure occurs after their best efforts, then they need to objectively determine the real cause(s) for their failure and not simply blame their failure on the difficulty of the task.

In the present study, girls were also found to score higher on a measure of task goal and a measure of social solidarity goal relative to boys. As noted earlier, a task goal is characterized by an emphasis on the task at hand, effort and improvement in one's work and so forth while a social solidarity goal is characterized by an emphasis on interpersonal relations such as demonstrating good intentions, seeking social approval and so on. This finding seems to corroborate those reported by Maehr and Braskamp (1986), who found that adult females tended to score higher and adult males score lower on a task goal measure and also on an affiliation measure.

The finding that girls, relative to boys, have a stronger social solidarity goal seems to reflect girls' stronger motive and value for social affiliation noted by researchers (see, e.g., Mazur, 1989; Travis, Burnett-Doering, & Reid, 1982). This stronger social solidarity goal may very well serve as an additional incentive for girls to achieve, thereby helping them to perform better than boys in school. The finding that girls are more task-oriented relative to boys seems to show that girls are more adaptive in their achievement strivings because they tend to have a better focus on the task, which might be expected to contribute to their achievement outcomes. These findings, along with the finding that girls' perception of the cause of their success as more internal and controllable, their perception of the cause of their failure as more internal, and their greater tendency to attribute failure to lack of ability and effort together suggest the following: Girls' academic motivational orientation is one that puts greater emphasis on personal responsibility and social solidarity and is more adaptive compared to that of boys. And this may be one reason for their higher performance in schoolwork.

That girls were found to perceive the cause for their success as more internal and controllable and attributed their failure to lack of effort more than boys suggests that there is a stronger sense of personal responsibility for achievement outcomes in schoolwork on the part of girls. This finding probably helps explain why girls tend to

outperform boys in school. The educational implication of these findings is that it is important not only to applaud the stronger sense of personal responsibility for schoolwork in girls but, perhaps more importantly, also to educate boys to enhance their level of consciousness of this sense of personal responsibility. In other words, it is important to help foster and reinforce the development of a sense of personal responsibility for achievement outcomes among boys to enhance their academic performance.

The present finding that girls tended to perceive success as more controllable and internal relative to boys seems to agree with that of Eccles, Adler and Meece (1984). In their study with students in grade 8 through 10 on their performance in math and English, these researchers found little support for the learned-helplessness pattern of attributions for achievement behavior for girls reported in the literature. The learned-helplessness pattern of attributions is characterized by attributing both success and failure to external and uncontrollable causes (see, e.g., Eccles, Adler, & Meece, 1984). As described, the present finding suggests that this is not the case for the present sample of students since a tendency was found for girls to perceive success as more controllable and internal relative to boys. Because the subjects in the study by Eccles, Adler, and Meece (1984) and the present study were of secondary school age (grade 8 and up) while the subjects in studies showing learned-helplessness patterns of

attributions were of other age levels (see, e.g., Dweck & Reppucci, 1973; Nicholls, 1975; Stipek, 1984) and also because of differences in the tasks used, one might speculate that the learned-helplessness pattern of attributions may be a function of both the age of subjects and the specific tasks at hand. Perhaps further research may be conducted to address this issue.

Girls in this study were found to perceive their parents to attribute their failure in schoolwork to the difficulty of the task more relative to boys. This finding may help explain the finding noted earlier that girls themselves tended to attribute their failure in schoolwork to the difficulty of task more relative to boys. This is because one might argue that girls are socialized to a greater extent than boys to attribute their failure in schoolwork to the difficulty of the task by adopting and internalizing what they perceive to be their parents' values more than boys.

Girls in this study also were found to be more likely than boys to perceive their parents to emphasize grades on tests and assignments and how hard they work. This finding seems to suggest that girls may be subject to more achievement pressure than boys. It also points to one direction in which girls may please their parents, namely, getting good grades and working hard. Conceivably, it is this perceived parental emphasis on getting good grades on tests and assignments and on working hard that might help

explain why girls outperform boys in school. This seems to be especially true given that girls were found to have a stronger social solidarity goal relative to boys. It should be noted, however, that girls themselves were not found to emphasize grades on tests and assignments and how hard they work any more in relation to boys. This thus seems to suggest that girls did not agree and hence did not adopt or internalize what they perceived to be their parents' values.

In this study, girls also were found to perceive their parents to emphasize how well they do compared to other students in their class less relative to boys. This finding may represent a perception based on traditional sex-role stereotype that girls are supposed to be less competitive than boys. However, girls in the present study were not found to emphasize how well they do compared to other students in their class less relative to boys. This finding thus again seems to show that girls did not adopt or internalize what they perceived to be their parents' value and they therefore did not emphasize how well they do compared to other students in their class less relative to boys. It also seems to show that the female students in the present study may represent a new generation who does not espouse traditional sex-role stereotype about competitiveness. Perhaps further studies may be conducted to address this conjecture.

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Table 1

Summary of Multiple Regression Analysis: Gender Differences in Academic Motivational Orientations

| Measure | Beta |
|---|---|
| Perception of cause of success as internal and controllable | -.14** |
| Perception of cause of failure as internal | -.14** |
| Attributing failure to lack of ability | -.12* |
| Attributing failure to lack of effort | -.11* |
| Attributing failure to task difficulty | -.20*** |
| Task goal | -.21*** |
| Social solidarity goal | -.11* |

Note:
Gender coded: 1=Male, 0=Female.
*p < .05. **p < .01. ***p < .001.

Table 2

Summary of Discriminant and Multiple Regression Analysis: Gender Differences in Perceived Parental Academic Motivational Orientations

| Measure | Statistics |
|---|---|
| Your grades on tests and assignments | Lambda=.97* |
| How well you do compared to other students in your class | Lambda=.97* |
| How hard you work | Lambda=.96** |
| Attributing failure to task difficulty | Beta=-.11* |

Note:
Gender coded: 1=Male, 0=Female.
*p < .05. **p < .01.